15. Process according to claim 6, characterized in that the temperature in the melt bath lies in the range of 1100° to 1380°C, especially preferably in the range of 1280° to 1380°C.

16. Process according to claim 7, characterized in that the temperature in the melt bath lies in the range of 1100° to 1380°C, especially preferably in the range of 1280° to 1380°C.

17. Process according to claim 6, characterized in that the space above the melt surface has a temperature in the range of 500 to 700°C.

18. Process according to claim 7, characterized in that the space above the melt surface has a temperature in the range of 500 to 700°C.

19. Process according to claim 8, characterized in that the space above the melt surface has a temperature in the range of 500 to 700°C.

20. Process according to claim 6, characterized in that the stirring occurs at a rotation rate in the range of 30 to 100 rpm.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

1. Meltdown device for the production of high-UV transmittive glass types, comprising

1.1 a meltdown tank (1) for a melt bath

1.2 a feed opening (11) for the feeding or laying-in of highly pure raw material for the melt bath

1.3 a draw-off opening (5) for the drawing-off of material melted in the melt tank

1.4 a cover (9) arranged above the melt tank (1), in which

1.5 the feed opening (11) on the melt tank (1) is arranged above the melt bath in the zone of the cover (9)

1.6 the draw-off opening (5) is arranged in the zone of the bottom of the melt tank

1.7 a heating arrangement,
characterized in that

1.8 the heating arrangement comprises heating elements, in particular electrodes (17.1, 17.2, 17.3, 17.4) which are arranged on the melt tank in the zone of the melt bath as well as

1.9 an agitating arrangement (30) for the stirring of the melt bath and uniform intermixing and sub-mixing of material into the melt from the mixture lying on the melt surface.

2. Meltdown device according to claim 1, characterized in that the melt tank has a circular external geometry.

3. Meltdown device according to claim 2, characterized in that the agitating arrangement comprises an agitator (30) with a first section (30.1), second section (30.2) and a third section (30.3), in which the first section is arranged centrally to the melt tank, the agitator (or stirrer) is continued in a second section closely below the melt surface turned through a 90^0 angle up to two-thirds of the outer radius, upon which the third section follows, which again is continued downward turned through a 90^0 angle.

4. Meltdown device according to [one of claims 1 to 3] claim 1, characterized in that temperature measuring devices are arranged in the cover and/or bottom.

5. Process for the production of glasses highly transmissive in the UV range by means of a melting process in which the melting process is carried out in a melt tank (1), in which there is present a glass melt with a melt surface (15), comprising the following steps:

5.1 a well-homogenized mixture of highly pure glass raw materials of the highly transmittive glasses to be melted is steadily fed through a feed opening (11) of the melt tank, in such manner that a closed mixture cover arises on the melt surface (15)

5.2 energy is supplied to the glass melt, in which operation the energy feed occurs always underneath the melt surface (15)

5.3 to the space above the melt surface and to the melt surface itself no energy is supplied

5.4 the glass melt is agitated and

5.5 material from the mixture resting on the melt surface is uniformly intermixed and sub-mixed into the melt.

6. Process according to claim 5, characterized in that the highly transmittive glass types are Flint glass types with an Abbe coefficient of $v_d \leq 50$.

7. Process according to [one of claims 5 to 6] claim 5, characterized in that the feeding-in of the highly pure glass raw materials occurs either in portions or continuously.

8. Process according to [one of claims 5 to 7] claim 5, characterized in that the temperature in the melt bath lies in the range of 1100^0 to 1380^0C, especially preferably in the range of 1280^0 to 1380^0C.

9. Process according to [one of claims 5 to 8] claim 5, characterized in that the space above the melt surface has a temperature in the range of 500 to 700^0C.

10. Process according to [one of claims 5 to 9] claim 5, characterized in that the stirring occurs at a rotation rate in the range of 30 to 100 rpm.

11. Use of the glass types produced by the process according to [one of claims 5 to 10] claim 5, for r-LCD for lens systems, for glass fibers and fiber reinforcers.

12. Meltdown device according to claim 2, characterized in that temperature measuring devices are arranged in the cover and/or bottom.

13. Meltdown device according to claim 3, characterized in that temperature measuring devices are arranged in the cover and/or bottom..

14. Process according to claim 6, characterized in that the feeding-in of the highly pure glass raw materials occurs either in portions or continuously.

15. Process according to claim 6, characterized in that the temperature in the melt bath lies in the range of 1100° to 1380°C, especially preferably in the range of 1280° to 1380°C.

16. Process according to claim 7, characterized in that the temperature in the melt bath lies in the range of 1100° to 1380°C, especially preferably in the range of 1280° to 1380°C.

17. Process according to claim 6, characterized in that the space above the melt surface has a temperature in the range of 500 to 700°C.

18. Process according to claim 7, characterized in that the space above the melt surface has a temperature in the range of 500 to 700°C.

19. Process according to claim 8, characterized in that the space above the melt surface has a temperature in the range of 500 to 700°C.

20. Process according to claim 6, characterized in that the stirring occurs at a rotation rate in the range of 30 to 100 rpm.

VERSION AS CHANGED

IN THE CLAIMS

1. Meltdown device for the production of high-UV transmittive glass types, comprising

1.1 a meltdown tank (1) for a melt bath

1.2 a feed opening (11) for the feeding or laying-in of highly pure raw material for the melt bath

1.3 a draw-off opening (5) for the drawing-off of material melted in the melt tank

1.4 a cover (9) arranged above the melt tank (1), in which

1.5 the feed opening (11) on the melt tank (1) is arranged above the melt bath in the zone of the cover (9)

1.6 the draw-off opening (5) is arranged in the zone of the bottom of the melt tank

1.7 a heating arrangement,
characterized in that

1.8 the heating arrangement comprises heating elements, in particular electrodes (17.1, 17.2, 17.3, 17.4) which are arranged on the melt tank in the zone of the melt bath as well as

1.9 an agitating arrangement (30) for the stirring of the melt bath and uniform intermixing and sub-mixing of material into the melt from the mixture lying on the melt surface.

2. Meltdown device according to claim 1, characterized in that the melt tank has a circular external geometry.

3. Meltdown device according to claim 2, characterized in that the agitating arrangement comprises an agitator (30) with a first section (30.1), second section (30.2) and a third section (30.3), in which the first section is arranged centrally to the melt tank, the agitator (or stirrer) is continued in a second section closely below the melt surface turned through a 90^0 angle up to two-thirds of the outer radius, upon which the third section follows, which again is continued downward turned through a 90^0 angle.

4. Meltdown device according to claim 1, characterized in that temperature measuring devices are arranged in the cover and/or bottom.

5. Process for the production of glasses highly transmissive in the UV range by means of a melting process in which the melting process is carried out in a melt tank (1), in which there is present a glass melt with a melt surface (15), comprising the following steps:

5.1 a well-homogenized mixture of highly pure glass raw materials of the highly transmittive glasses to be melted is steadily fed through a feed opening (11) of the melt tank, in such manner that a closed mixture cover arises on the melt surface (15)

5.2 energy is supplied to the glass melt, in which operation the energy feed occurs always underneath the melt surface (15)

5.3 to the space above the melt surface and to the melt surface itself no energy is supplied

5.4 the glass melt is agitated and

5.5 material from the mixture resting on the melt surface is uniformly intermixed and sub-mixed into the melt.

6. Process according to claim 5, characterized in that the highly transmittive glass types are Flint glass types with an Abbe coefficient of $v_d \leq 50$.

7. Process according to claim 5, characterized in that the feeding-in of the highly pure glass raw materials occurs either in portions or continuously.

8. Process according to claim 5, characterized in that the temperature in the melt bath lies in the range of 1100^0 to 1380^0C, especially preferably in the range of 1280^0 to 1380^0C.

9. Process according to claim 5, characterized in that the space above the melt surface has a temperature in the range of 500 to 700^0C.

10. Process according to claim 5, characterized in that the stirring occurs at a rotation rate in the range of 30 to 100 rpm.

11. Use of the glass types produced by the process according to claim 5, for r-LCD for lens systems, for glass fibers and fiber reinforcers.

12. Meltdown device according to claim 2, characterized in that temperature measuring devices are arranged in the cover and/or bottom.

13. Meltdown device according to claim 3, characterized in that temperature measuring devices are arranged in the cover and/or bottom..

14. Process according to claim 6, characterized in that the feeding-in of the highly pure glass raw materials occurs either in portions or continuously.

15. Process according to claim 6, characterized in that the temperature in the melt bath lies in the range of 1100° to 1380°C, especially preferably in the range of 1280° to 1380°C.

16. Process according to claim 7, characterized in that the temperature in the melt bath lies in the range of 1100° to 1380°C, especially preferably in the range of 1280° to 1380°C.

17. Process according to claim 6, characterized in that the space above the melt surface has a temperature in the range of 500 to 700°C.

18. Process according to claim 7, characterized in that the space above the melt surface has a temperature in the range of 500 to 700°C.

19. Process according to claim 8, characterized in that the space above the melt surface has a temperature in the range of 500 to 700°C.

20. Process according to claim 6, characterized in that the stirring occurs at a rotation rate in the range of 30 to 100 rpm.